



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,860	08/04/2003	Hideki Kuwajima	2003_1086A	4624

513 7590 10/14/2005

WENDEROTH, LIND & PONACK, L.L.P.
2033 K STREET N. W.
SUITE 800
WASHINGTON, DC 20006-1021

EXAMINER

BLOUIN, MARK S

ART UNIT	PAPER NUMBER
----------	--------------

2653

DATE MAILED: 10/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/632,860	Applicant(s) KUWAJIMA ET AL.	
	Examiner Mark Blouin	Art Unit 2653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment filed on 7/5/05.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2653

Detailed Action

Response to Amendment

- The reply filed on July 5, 2005 was applied to the following effect: Claims 1,3, and 6 have been amended, and Claims 12-21 have been added.

Drawings

1. The objection is withdrawn as being satisfied.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4,6-8,12-18,20, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Owe et al (EP 0342625).
4. Regarding Claims 1,2,6-8,14,20, and 21, Owe et al shows (Figs. 1 and 2), a disk drive apparatus comprising a disk rotative driving means for driving the disk, and head driving assembly for performing writing information into a predetermined track position of the disk or reading information out of a predetermined track position, a head driving assembly comprising a bearing portion for supporting the head supporting assembly for rotation in a direction parallel to a disk surface, and driving means for rotating the head supporting assembly in the direction parallel to the disk surface(Col 1, lines 1-54), and a head supporting assembly (Fig. 1) comprising a head performing at least one of recording and reproduction on a disk, a head supporting member parallelly displaced made up of the head (13), a head mount (12) with the

Art Unit: 2653

head mounted thereon, and a supporting arm (11) with the head mount attached to a first end thereof, a base arm (15) having a rotation-supporting portion for supporting the head supporting member for rotation in a direction toward and away from the disk plane, and a resilient member (21) having a first end thereof connected (17b) with a second end of the supporting arm at a connected portion and a second end thereof fixed (screws 16) to the base arm at a fixed portion for urging the head supporting assembly toward the disk, wherein the rotation supporting portion comprises a plurality of pivots (22) provided at a first end of the base arm, wherein the supporting arm (11) and the base arm (15) are separate members, wherein the second end of the resilient member is fixed to the first end of the base arm, and wherein the rotation-supporting portion of the base arm is provided at such a position that the head mount is allowed to be displaced relative thereto by pressing of the rotation-supporting portion in a pressing direction.

5. Regarding Claims 3,4, and 18, Owe et al shows (Figs. 1 and 2), the resilient member is a plate spring member (21) disposed between the base arm (15) and the supporting arm (11) so as to be bilaterally symmetric (around longitudinal centerline A-A), and resilient member has length L1 from the connected portion with the supporting arm to the fixed portion with the base arm, the length L1 satisfying relationship $L2/L1 \geq 0.5$, where L2 is a length from the rotation-supporting portion to the connected portion (See Examiner's Drawing).

6. Regarding Claims 12,13, and 15-17, Owe et al shows (Figs. 5-7), the head supporting assembly, wherein the pivot portions (22) are provided on a surface of the base arm (15) facing the supporting arm (11), and the pivot portions bear against the supporting arm, wherein the fixed portion is located between the connected portion and the head (Fig. 6), wherein the rotation-supporting portion comprises at least one pivot portion provided on a surface of the base

Art Unit: 2653

arm facing the supporting arm, and the at least one pivot portion bears against the supporting arm to serve as a fulcrum (22a), wherein the supporting arm undergoes substantially parallel displacement by pressing of the rotation-supporting portion of the base arm.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 5,9-11, and 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Owe et al (EP 0342625) in view of Berding (USPN 5,936,803).

9. Regarding Claims 5, 9-11, and 19 Owe et al shows (Figs. 1 and 2), all the features described, *supra*, but does not show a center of gravity of the head supporting member is positioned on a rotation axis of the rotation-supporting portion provided on the base arm.

Berding shows (Fig. 3) a center of gravity of the head supporting member (120) is positioned on a rotation axis of the rotation-supporting portion provided on the base arm (the supporting member (120) is mass balanced around rotation line "A").

It would have been obvious to one of ordinary skill in the art at the time the invention was made to mass balance the head suspension mechanism of Owe et al as taught by Berding. The rationale is as follows: One of ordinary skill in the art at the time the invention was made would have been motivated to mass balance the head suspension mechanism of Owe et al as taught by Berding in order improve shock resistance.

Response to Arguments

10. Applicant's arguments filed July 5, 2005 have been fully considered but they are not persuasive.

Applicant asserts on Page 9 :

"Thus, claim 1 now specifies that the rotation-supporting portion comprises a plurality of pivots 7 provided at a first end of the base arm 6 (as illustrated in Fig. 2), that the supporting arm 3 and the base arm 6 are separate members, and that a first end (e.g. left end in Fig. 2) of the resilient member is fixed to the second end (left end in Fig. 2) of the base arm 6. This is clearly not the case in the Owe reference, wherein the resilient member 17 has its right hand end secured to a portion of the supporting member ..."

The Examiner maintains that Owe clearly shows (Figures 5-7) the rotation-supporting portion comprises a plurality of pivots (22) (fulcrum-22a) provided at a first end of the base arm (15), that the supporting arm (11) and the base arm (15) are separate members, and that a first end of the resilient member (21) is fixed to the second end of the base arm 6.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Blouin whose telephone number is (571) 272-7583. The examiner can normally be reached M-F, 6:00 am – 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful the examiner's supervisor, William Korzuch can be reached at (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300 for regular and After Final communications.

Any inquiry of general nature or relating to the status of application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

Application/Control Number: 10/632,860

Page 8

Art Unit: 2653

Mark Blouin

Patent Examiner

Art Unit 2653

October 4, 2005

A. J. HEINZ
PRIMARY EXAMINER
GROUP ~~2653~~ A. U. 2653

A. J. Heinz